



Patent  
Attorney's Docket No. 1000500-000301

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of	)	<b>Mail Stop:</b>
Anette BUSCHKA et al.	)	<b>APPEAL BRIEF - PATENTS</b>
Application No.: 09/870,517	)	Group Art Unit: 1771
Filed: June 1, 2001	)	Examiner: Elizabeth Cole
For: A TEXTILE FIBRE REINFORCED	)	Confirmation No.: 9594
ABSORBENT MATERIAL	)	Appeal No.: 1

**REPLY BRIEF**

**Mail Stop APPEAL BRIEF - PATENTS**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In response to the Examiner's Answer issued April 13, 2006, please consider the following remarks. Issues raised by the Examiner, which are not specifically addressed below, are not to be considered conceded.

**I. Status of Claims**

Claims 1-36 are pending, rejected and presently appealed.

## **II. Grounds of Rejection to be Reviewed on Appeal**

- 1) Claims 1-32 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Matsumura* (U.S. Patent No. 4,018,646) in view of *Ruffo* (U.S. Patent No. 4,018,646) and *Fehrer* (U.S. Patent No. 4,972,551).
- 2) Claims 33-36 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Matsumura* (U.S. Patent No. 4,018,646) in view of *Ruffo* (U.S. Patent No. 4,018,646) and *Fehrer* (U.S. Patent No. 4,972,551) and further in view of *Rosseland* (WO 97/45083).

### III. Argument

The Examiner asserts:

Matsumura teaches forming the thin long fiber mat, which corresponds to the claimed nonwoven gauze, by supplying a carded lap, (a lap is a plurality of fibers which have been compressed), opening the lap to individualize the fibers by means of a lickerin, and then air laying the fibers to form the gauze.

This is incorrect. Matsumura does not teach a thin, long fiber mat which corresponds to the claimed non-woven gauze. See page 5 of the Appeal Brief.

The Examiner asserts it would have been obvious to employ the air doffing apparatus having at least one carding element in the process of Matsumura.

This is incorrect. See pages 4-6 of the Appeal Brief.

The Examiner asserts

Appellant has not met their burden of proof in showing that the gauze of Matsumura is different [from] the claimed gauze because a different apparatus is used to form the gauze the layer.

The significance of the difference between the gauze of Matsumura and the claimed gauze is explained throughout the Appeal Brief.

The Examiner asserts that

Matsumura teaches that carding results in easy delamination of the web at col. 3, lines 24-30. However, at col. 3, Matsumura is referring to the carding method set forth at col. 1, lines which discusses forming layers of ling fibers by carding. That is not the method which Matsumura teaches, but rather of background method. The Matsumura method employs a carded lap... in which the fibers are individualized by the lickerin and fed into the air stream to be formed into the gauze layer. Also, with regard to delamination, Matsumura is referring to the ease by which two separate layers of carded fibers which are laminated can be delaminated.

Further, the Examiner asserts that while a single apparatus may perform both carding and air laying, they are not the same process.

However, the Examiner has confused issues. Applicants simply highlight that air laying fibers directly from a card (in an integrated apparatus) is significant and provides a unique gauze. Interjection of another apparatus between the carding and the air laying may result in a significantly different gauze, and in the case of an interjected lickerin, does result in a significantly different gauze.

Considering this, using a previously carded fiber lap with a lickerin as part of an air doffing apparatus results in a significantly different gauze from the claimed gauze.

With regard to the delamination, Matsumura is referring to a layer of woodpulp that delaminates from a layer of carded gauze. Matsumura teaches resorting to a lickerin and an adhesive bonding agent to overcome such problems. However, the presently claimed invention has overcome these problems without the resort to a lickerin or a bonding agent.

The Examiner asserts that applicants have not pointed out where Matsumura teaches that the fibers should be a random webbing and not aligned. Attention is drawn to columns 1-3 of Matsumura where Matsumura discusses aligned vs. random fibers and the use of a lickerin to obtain random fibers. Matsumura, at column 8, lines 35-64, discloses that a lickerin is used to form a mat on endless wire 119.

Respectfully submitted,

Buchanan Ingersoll PC

Date June 13, 2006

By:



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## Table of Contents

	<b>Page</b>
<b>I. Real Party in Interest .....</b>	
<b>II. Related Appeals and Interferences .....</b>	
<b>III. Status of Claims .....</b>	<b>2</b>
<b>IV. Status of Amendments .....</b>	
<b>V. Summary of Claimed Subject Matter .....</b>	
<b>VI. Grounds of Rejection to be Reviewed on Appeal .....</b>	<b>3</b>
<b>VII. Argument .....</b>	<b>4</b>
<b>VIII. Claims Appendix .....</b>	
<b>IX. Evidence Appendix .....</b>	
<b>X. Related Proceedings Appendix .....</b>	

## **VIII. CLAIMS APPENDIX**

### **The Appealed Claims**

1. (Previously Presented) An absorbent material comprising a mat of dry-laid cellulose fibres integrated with an air-laid non-woven gauze comprised of reinforcing textile fibres,

the air-laid non-woven gauze formed with an air-doffing apparatus card to provide a porous, penetrable gauze layer,

the absorbent material obtained by directly dry-laying the cellulose fibres on the newly formed gauze of textile fibres so that a portion of the cellulose fibres penetrate into the gauze to achieve a sufficient bonding with the textile fibres without any bonding agent.

2. (Original) An absorbent material according to claim 1, wherein the reinforcing textile fibres have a length of 10-100 mm.

3. (Original) An absorbent material according to claim 1, wherein the reinforcing textile fibres have a length of 32- 60 mm.

4. (Original) An absorbent material according to claim 1, which includes up to 10% by weight reinforcing fibres, calculated on a total weight of the absorbent material.

5. (Original) An absorbent material according to claim 4, which contains 2-8% reinforcing fibres.

6. (Original) An absorbent material according to claim 4, which contains 3-6% reinforcing fibres.

7. (Original) An absorbent material according to claim 1, wherein the reinforcing fibres are natural fibres or synthetic fibres.

8. (Original) An absorbent material according to claim 7, wherein the reinforcing fibres are cotton fibres, rayon fibres or polyester fibres.

9. (Original) An absorbent material according to claim 1, wherein the weight ratio between the cellulose fibre layer and the textile fibre layer is from 20:80 to 80:20.

10. (Original) An absorbent material according to claim 9, wherein the weight ratio is from 35:75 to 75:35.

11. (Original) An absorbent material according to claim 9, wherein the textile fibres have a gauge of 5-30 dtex.

12. (Original) An absorbent material according to claim 11, wherein the gauge is 10-25 dtex.

13. (Original) An absorbent material according to claim 11, wherein the gauge is 15-20 dtex.

14. (Original) An absorbent material according to claim 4, wherein the textile fibres have a gauge of 1-10 dtex.

15. (Original) An absorbent material according to claim 14, wherein the gauge is 1-4 dtex.

16. (Previously Presented) A method of producing an absorbent material that includes a mat of dry-laid cellulose fibres integrated with an air-laid non-woven gauze comprised of reinforcing textile fibres, comprising:

air-forming textile fibres with an air-doffing apparatus card to form on a wire a non-woven gauze; and

directly dry-laying the cellulose fibres on the newly formed non-woven gauze of textile fibres to integrate the cellulose fibres with the non-woven gauze and form a mat wherein a portion of the cellulose fibres penetrate into the gauze to achieve a sufficient bonding with the textile fibres without any bonding agent.



17. (Original) A method according to claim 16, wherein the reinforcing textile fibres have a length of 10-100 mm.

18. (Original) A method according to claim 17, wherein the length is 20-80 mm.

19. (Original) A method according to claim 17, wherein the length is 32-60 mm.

20. (Original) A method according to claim 16, wherein the material contains up to 10% by weight reinforcing fibres, calculated on a total weight of the absorbent material.

21. (Original) A method according to claim 20, wherein the material contains 3-8% reinforcing fibres.

22. (Original) A method according to claim 16, wherein the reinforcing fibres are natural fibres or synthetic fibres.

23. (Original) A method according to claim 22, wherein the reinforcing fibres are cotton fibres, rayon fibres or polyester fibres.

24. (Original) A method according to claim 16, wherein the weight ratio between the cellulose fibre layer and the textile fibre layer is from 20:80 to 80:20.

25. (Original) A method according to claim 24, wherein the weight ratio is from 35:75 to 75:35.

26. (Previously Presented) A process for producing an absorbent product, comprising:

air-forming textile fibres with an air-doffing apparatus card to form on a wire a non-woven gauze;

directly dry-laying the cellulose fibres on the newly formed non-woven gauze

of textile fibres to integrate the cellulose fibres with the non-woven gauze and form a mat wherein a portion of the cellulose fibres penetrate into the gauze to achieve a sufficient bonding with the textile fibres without any bonding agent; and including the mat in an absorbent product.

27. (Original) A process according to claim 26, wherein the integrated mat of cellulose fibres and non-woven gauze is directly incorporated in an absorbent product without intermediate defibration.

28. (Original) A process according to claim 26, wherein the integrated mat of cellulose fibres and non-woven gauze is defibred and mat-formed into an absorbent core that is then incorporated into an absorbent product.

29. (Previously Presented) An absorbent structure including cellulose fibres reinforced with textile fibres,

the structure having been produced by defibrating and mat-forming an absorbent material comprising a dry-laid mat of cellulose fibres integrated with an air-laid non-woven gauze of long reinforcing textile fibres,

the air-laid non-woven gauze of long reinforcing textile fibres being formed with an air-doffing apparatus card,

wherein the absorbent material is obtained by directly dry-laying the cellulose fibres on the newly formed gauze of textile fibres so that a portion of the cellulose fibres penetrate into the gauze to achieve a sufficient bonding with the textile fibres without any bonding agent.

30. (Previously Presented) A method of producing an absorbent structure including cellulose fibres and reinforcing textile fibres, comprising:

air-forming textile fibres with an air-doffing apparatus card to form on a wire a non-woven gauze;

directly dry-laying the cellulose fibres on the newly formed non-woven gauze of textile fibres to integrate the cellulose fibres with the non-woven gauze and form a mat wherein a portion of the cellulose fibres penetrate into the gauze to achieve a sufficient bonding with the textile fibres without any bonding agent; and

defibrating and mat-forming the integrated mat of cellulose fibres and non-woven gauze.

31. (Original) An absorbent material according to claim 1, wherein the reinforcing textile fibres have a length of 20-80 mm.

32. (Original) A process according to claim 26, wherein the absorbent product is one of a diaper, sanitary napkin, tampon, panty protector, incontinence guard, bed protector, wound or sore dressing, and a saliva absorbent.

33. (Previously presented) An absorbent material according to claim 1, wherein the cellulose fibres are flash dried.

34. (Previously presented) An absorbent material according to claim 1, wherein the cellulose fibres are HTCTMP.

35. (Previously presented) A method according to claim 16, wherein the cellulose fibres are flash dried.

36. (Previously presented) A method according to claim 16, wherein the cellulose fibres are HTCTMP

## **IX. EVIDENCE APPENDIX**

None.

## **X. RELATED PROCEEDINGS APPENDIX**

None.